URS

Facsimile

Date: December 27, 2005 Page 1 of: 5

To: S. Harbour From: Randy S. Kyes

Firm: NV Dept. of Environmental Protection cc:

Facsimile: 702-486-2863

Subject: **Al Phillips-Maryland Square (H-000086) Remedial Pilot Study Plan**

Message:

Dear Ms. Harbour,

Enclosed please find a Remedial Pilot Study plan as requested of Al Phillips the Cleaners in your letter of November 16, 2005.

Please note that recent talks with the owner's representative suggest that we may be able to revise the plan to include onsite soil excavation if their plans for removal of the building move forward as quickly as projected. In the interim, however, we request that you regard this plan as the next step in remediation of tetrachloroethene impact to groundwater at the Maryland Square facility.

If there are any questions regarding this plan, please do not hesitate to contact us.

R. Kyes for S. Ball

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December 27, 2005

Nevada Division of Environmental Protection
Bureau of Corrective Actions, Remediation and LUST Branch
1771 East Flamingo Road, Suite 121-A
Las Vegas, Nevada 89119-0837

for:

Randall L. Jackson, Health, Safety & Environmental Director
DCI Management Group, Ltd.
4510 W. 63rd
Terrace Prairie Village, KS 66208

Re: Proposed Remedial Pilot Study
Former Al Phillips The Cleaners, Inc.
Former Maryland Square Shopping Center
3661 South Maryland Parkway, Las Vegas, Nevada
Facility ID: H-000086

Attn: Ms. Shannon Harbour, EI

This letter is in response to your November 16, 2005 letter to Mr. Randall Jackson, regarding development of a Remedial Pilot Study (RPS) for tetrachloroethylene (PCE) impacted groundwater beneath the former Al Phillips the Cleaner (Al Phillips) facility located at the Former Maryland Square Shopping Center, 3663 South Maryland Parkway, Las Vegas, Nevada.

In addition to considering the potential applicability, effectiveness, and implementability of a remedial technology for the RPS, Al Phillips also considered the property owner's direction regarding when the property may be redeveloped and what that future use will be. The following paragraphs discuss these technical and logistical issues.

Groundwater beneath the site has dissolved concentrations of PCE that are above the Nevada Division of Environmental Protection's (NDEP) Maximum Contaminant Level (MCL) of 5 micrograms per liter (µg/L). A limited number of remedial technologies have been applied elsewhere in the Las Vegas Valley for cleanup of dissolved PCE contaminated groundwater. The technologies include enhanced in-situ bioremediation (EIB), in-situ chemical oxidation (ISCO), and mass transfer methods. EIB methods have included injection of Hydrogen Release Compound (HRC) to promote reductive dechlorination of PCE by native microbes within the soil and groundwater. Based on

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records available at NDEP, HRC remedial efforts to date appear to be inconclusive, or at worst ineffective, in remediating dissolved PCE in groundwater. ISCO methods employed in the valley include the injection of permanganate solutions. This technology is in its early stages of implementation and not enough data has been collected to evaluate its effectiveness.

Al Phillips has utilized two types of groundwater remedial systems over the last four years at two other PCE contaminated sites located in the Las Vegas Valley. These were a groundwater air sparging (AS) system (mass transfer) and an ozone sparging (OS) system (ISCO and mass transfer). Based on groundwater analytical data obtained over the last six years at these two sites, both AS and OS appear to have been effective in reducing dissolved PCE concentrations in groundwater near the origin of the release. The use of AS during the early period of remedial action at both sites had the impact of decreasing dissolved concentrations of PCE from thousands of µg/L to only a few hundred or less than one hundred µg/L in many of the wells around the source area. The use of OS over the last few years has had some additional effect in decreasing dissolved PCE concentrations at the source area to less than 100 µg/L in most cases.

One of the logistical concerns for the RPS is the timing of site re-development. Based on information provided by Maryland Square LLC (MS), the new owner of the site, the existing buildings will demolished within the next year and development of the site could be started within the next two years. MS is currently conducting a development study that will provide information regarding the timing for development as well as the type of development. Al Phillips does not know when this report will be available. Since the existing buildings will be demolished within the next year there is limited time to design a remedial system, obtain permits, and construct and operate the system. Time-sensitive elements of potential remedial options include an Underground Injection Control (UIC) permit, which would be required by NDEP for EIB and ISCO approaches. A UIC permit could take several months to obtain depending on the type of chemical used. If a secondary technology, such as soil vapor extraction, were used in conjunction with AS or injection of a chemical then an Air Quality Discharge permit would be required. This type of permit could also require several months to obtain.

The short projected time prior to building demolition also suggests that alternate housing of remedial systems will need to be considered. This situation favors RPS technologies that can be implemented with little delay and can be moved to new housing with minimal difficulty, or have no significant housing requirements.

Another logistical consideration in selection of the RPS is the proposed future use of the site. At this time, the future use of the site is not known but the owner intention is to

develop it as commercial property. The current zoning for the site is General Commercial. The future use of the site will impact future remedial actions for both groundwater and soil.

Having taken the aforementioned issues into consideration, Al Phillips proposes to install a groundwater AS system at the site within the former facility building. An AS RPS system will require limited time to design, permit, and install compared to OS, chemical injecting with a UIC permit, or secondary enhancement using SVE, thereby allowing more time for operation/testing prior to demolition of the building.

The proposed AS RPS system will include an electrical panel, control system and timer, air compressor, pressure relief valve, pressure gauges, above ground manifold, distribution piping and valves, and five air injection wells located at the same location as boreholes B-6 through B-10 drilled during the soil investigation in the spring of 2005. These boreholes were drilled to a depth of approximately 16.5 feet below ground surface (bgs), just above groundwater (approximately 19 feet bgs), and were backfilled with hydrated bentonite pellets and concreted at the surface. These boreholes will be re-drilled to approximately 30 to 35 feet bgs to encounter groundwater. A 5-foot section of one-inch diameter PVC AS screen will be installed in each borehole approximately 10 to 15 feet below groundwater. The annular space around the AS screens will be backfilled with a fine-grained sand pack to two feet above the screen. The rest of the boreholes will be filled with a bentonite slurry and a concrete plug near the surface of the building floor. The complete AS RPS system will be located inside the former facility building. The system will require minimal effort to remove prior to demolition of the building. Once demolition activities are complete the RPS system will be reinstalled when power, shelter and new AS wells can be installed, assuming development of the site does not take place soon after demolition. Once Al Phillips learns what the future development of the site will be, the RPS will be re-evaluated and modifications made if necessary.

Al Phillips will utilize existing groundwater monitoring wells MW-1, MW-5 through MW-9, MW-12, and MW-14 located immediately up gradient and down gradient from the existing building, along with one additional temporary two inch diameter monitoring well located at borehole B-96 inside the former facility, to evaluate the impact the AS RPS has on degradation of dissolved PCE in groundwater in the source are beneath the building and down gradient. Monitoring of these wells will be performed one, two and three months after startup of the AS RPS system and then in conjunction with normal quarterly groundwater sampling. Groundwater samples will be analyzed for volatile organic compounds by U.S. EPA Method 8260B.

DCI requests that NDEP approve this RPS for implementation at the former Al Phillips facility. If you have questions regarding this information, please contact Mr. Scott Ball from URS at 837-1500.

Sincerely,
URS Corporation

Scott Ball

Scott Ball, C.E.M.
Senior Project Manager

Cc: Mr. Randall L. Jackson, DCI Management Ltd.
Mr. James R. Janz, Tomlinson Zisko, LLC.
Ms. Sonja A. Inglin, Jenkens & Gilchrist, LLP
Mr. Franklin Levy, Maryland Square LLC
Mr. Dennis Connair, URS Corporation